

Methods of Adapting Urban Forestry Practices

Breeding of New Cultivar Species

I. Heat

- *Acer platanoides*: Crimson King
- *Betula pendula subsp. pendula*
- *Tilia cordata*: Greenspire
- *Ficus benjamina*: Golden King
- *Acer rubrum*: October Glory
- *Carpinus betulus*: Cornerstone; Pyramidalis
- *Acer negundo*: Variegatum
- *Syringa reticulata*: Peking Lilac
- *Acer saccharum*: Green Mountain
- *Platanus x hispanica*: Malbur
- *Lagerstroemia indica*: all species

II. Cold

- *Acer platanoides*: Schwedleri
- *Acer rubrum*: Autumn Spire
- *Carpinus betulus*: Fastigiata
- *Picea pungens*: Fastigiata
- *Pyrus calleryana*: Autumn Blaze
- *Ulmus parvifolia*: Hallelujah
- *Syringa reticulata*: Ivory Silk
- *Mangifera indica*: Bailey's Marvel
- *Acer saccharum*: Inferno
- *Platanus x hispanica*: Malburg
- *Lagerstroemia indica*: Sarah's Favorite

III. Dry

- *Acer platanoides*: Deborah
- *Quercus robur*: f. Fastigiata
- *Carpinus betulus*: Frans Fontaine; Pyramidalis
- *Picea pungens*: Glauca Globosa
- *Ulmus parvifolia*: Emerald Isle
- *Syringa reticulata*: Summer Flare
- *Mangifera indica*: Kensington Pride
- *Acer saccharum*: Caddo
- *Platanus x hispanica*: Malburg
- *Lagerstroemia indica*: Natchez

IV. Wet

- *Ulmus parvifolia*: Dynasty
- *Syringa reticulata*: Ivory Silk
- *Platanus x hispanica*: Bloodgood

Cities Updating Urban Forestry Strategies

I. Paris

- <https://www.bloomberg.com/news/articles/2023-06-06/paris-city-council-adopts-plan-to-plant-trees-that-survive-extreme-heat>
- The City of Paris has historically planted trees with the primary purposes of aesthetic value and providing shade: Plane, Chestnut, Linden, and Japanese Pagoda. They are now considering species that are more resistant to heat and better able to handle the stress of not having water. The City is making sure to plant species that are already present within the capital that are proving to survive well: Turkish hazel, Montpellier maple, European nettle tree, or the holm oak—versus beech trees, which are currently present, but have not adapted as well to the heat. Beech trees would do better in more humid climates.
- The City is also cautiously aware about the dangers of relying on a handful of species, and are researching and compiling a list of other species that could do well if planted for the first time in Paris, along with suitable locations, sunlight and water needs. The list can be found [here](#).

II. Barcelona

- https://www.c40knowledgehub.org/s/article/Trees-for-Life-Master-Plan-for-Barcelona-s-Trees-2017-2037?language=en_US
- Barcelona's *Trees for Life: Master Plan* is set on a timeline from 2017-2037. The largest component to the plan is an increase from 30% to 40% of trees planted in the city will be adapted to climate change. The plan also outlines achieving a diverse biodiversity of tree heritage—ensuring that no single species accounts for more than 15% of the total population within the urban area.
- The city has 68 planned actions, divided across 10 strategic lines, to implement these changes in infrastructure. There is an emphasis on community engagement, involvement, and education, to help push the importance of urban trees and how to care for them.

III. Detroit

- <https://sbn-detroit.org/restoring-detroits-tree-canopy/>
- <https://planetdetroit.org/2023/04/climate-change-has-detroit-other-u-s-cities-rethinking-what-kinds-of-trees-to-plant/>
- The City of Detroit is being intentional about both the species of trees they are planting, but also their location. Currently, 40% of Detroit's trees are considered 'poor health', and approximately 30% of the total trees are maple (*Acer*), so they do not intend on planting any more maple trees in an effort to increase biodiversity. Furthermore, they plan to ensure that no single species makes up more than 10% of the entire city's tree population. Their priority is to plant trees that are resilient against extreme heat, drought, and flooding, three issues that are only going to increase in frequency and intensity in the future, with a preference for native species: Eastern redbud, American witch hazel, and White oak.

IV. Seattle

- Personal Communication: Bria Blitch, Trees for Seattle

- Seattle has been in communication with surrounding municipalities in the Puget Sound region so that all local governments are on the same page when it comes to updating their urban forestry practices. They are currently working on a list of suitable species that are projected to be used for urban plantings throughout the region, though this list is not yet concrete. Changes are being made to the watering regime of newly planted, young trees. Currently, trees are being planted in the wet fall season to allow for establishment prior to the dry summer season, and are being supplementally watered for 3 years. Plantings will continue to be in the fall, but the supplemental watering will increase to 5 years.